



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,798	03/19/2004	Alfredo M. Morales	SD8287.2	8882

7590 01/10/2005

Timothy Evans
MS 9031
Sandia National Laboratories
7011 East Avenue
Livermore, CA 94550

EXAMINER

BARRECA, NICOLE M

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,798

Applicant(s)

MORALES ET AL.

Examiner

Nicole M Barreca

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 7-11 are pending in this application.
2. The claims are written in product-by-process form. See MPEP 2113.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 7-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Pricone (4,478,769).
5. An embossing tool with non-prismatic metal structures is formed. The outline shape of the element may be triangular, square or hexagonal. Figure 2 illustrates an example wherein the intersection of grooves 31, 34 and 37 create base 41 for each of the tetrahedrons or cube-corner elements 40. See col.4, l.1-48, col.5, l.24-63 and the figures.
6. Claims 7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Mentz (US 6,017,657).

Art Unit: 1756

7. Figure 4 illustrates an embossing tool having pattern 14 of lands and grooves formed directly on a tool substrate made of a hard material, such as steel. As can be seen in the figure the pattern 14 is non-prismatic and curvilinear. See col.7, l.27-49.

8. Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ronan (US 6,277,464).

9. Embossing tool 33 is a metal die having a plurality of protrusion 32. The protrusions can be of any desired cross-sectional shape, such as tetragonal, round, ovoid, oblong, orthogonal, stelliform or any other desired shape. The protrusion 32 may also change its shape along its length. For example it may be tetragonal at the base and round at the tip. Figures 5A and 5B illustrate tapered pyramidal or conical protrusions. See col.6, l. 48-68, col.8, l. 28-65 and the figures.

10. Claims 7-9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Bonivert (US 6,350,360).

11. A three-dimensional multi-level imprint tool having features of varying geometry stacked one on top of another feature used for embossing is formed. A thin layer of copper 24 is formed over resist pattern in order to enable the adherence of thick metal layer 26. The thick layer 26 is then removed from substrate base. See col.5, l.15-47 and figures 3A-3C.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole M Barreca whose telephone number is 571-272-1379. The examiner can normally be reached on Monday-Thursday (9AM-7PM).

Art Unit: 1756

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nicole M Barreca
Examiner
Art Unit 1756



1/7/05